

## Food allergy

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The term "food allergy" is used when an immunologic mechanism for food intolerance can be demonstrated.<sup>1</sup> The commonest is the presence of IgE antibodies, but cell-mediated immunity and immune complexes are sometimes involved.

Until recently few attempts had been made to examine food allergy scientifically. For this reason, food allergy is both underdiagnosed and overdiagnosed. It is estimated to affect 1.4% (0.5% to 3.8%) of infants and 0.3% (0.1% to 1.0%) of adults.<sup>2</sup> In certain groups, such as children with atopic dermatitis, the prevalence rate may be as high as 25%.<sup>2</sup> The common food allergens in children are cow's milk, eggs, fish, peanut, wheat and soy and in adults nuts, shellfish and eggs. It is not clear why certain foods are more allergenic than others. Predisposing factors include heredity, immunodeficiency, viral gastroenteritis and low birth weight. A child of a person with a history of atopy has a 37% risk of allergy; if both parents had atopy the risk is 65%.<sup>2</sup>

Clinical manifestations may appear in any organ system and range from mild to life threatening.<sup>1,2</sup> Young infants commonly present with gastrointestinal problems; older infants commonly have skin signs. Respiratory manifestations are rare. Angioedema and anaphylaxis may occur at any age. Arthralgia and migraine are sometimes linked to food allergy. There is no convincing evidence that food allergy is a factor in children's behaviour problems or hyperactivity.

Diagnosis is relatively easy when symptoms are acute and follow ingestion of a rare food such as shellfish. It is much more difficult when the reaction is mild and delayed or involves a common food such as wheat; skin prick tests with reliable antigen solutions are specific and will show immediate results.<sup>3</sup> Systemic reactions after skin testing are rare but should be borne in mind, especially if there is a history of severe angioedema or anaphylaxis. IgE

antibodies can also be detected, but the test may be so sensitive that they indicate a clinically irrelevant allergy. In patients with gastrointestinal symptoms jejunal mucosal biopsy is indicated. Diagnosis is confirmed by relief of symptoms on exclusion of the suspected food plus reappearance on rechallenge. The diagnostic "gold standard" is the double-blind placebo-controlled food challenge, but it is cumbersome, time consuming and not suitable for general clinical practice.

Management depends on exclusion of the offending food(s). Labels of all packaged foods should be checked carefully; sometimes a chemical name may not be familiar to the patient or family (e.g., casein for milk protein). Exclusion of many foods demands careful attention to the diet's nutritional content. Consultation with a dietitian is essential. In high-risk infants with a strong parental history prolonged, exclusive breast feeding should be encouraged; the benefits are enhanced if the mother excludes common allergenic foods from her own diet.<sup>4</sup> If a formula supplement is needed, a partially<sup>5</sup> or completely<sup>4</sup> hydrolysed one is preferred. Soy formula has not been found to prevent atopic disorders. The introduction of egg and fish should be delayed to 18 months and peanut to 36 months.

### References

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